Dear Friend:

Recreational boating is an important part of our culture in Massachusetts and an increasing number of residents and visitors are participating in boating and boating-related activities. In recent years, the growth and diversification of boating on Commonwealth waters has begun to challenge coastal managers by fueling an array of recreational boating issues and conflicting waterways uses.

Personal watercraft (PWC) are widely perceived as being among the most difficult recreational vessels to manage. They are frequently associated with management issues such as ecological damage, aesthetic degradation, multiple-use conflicts and public safety concerns, and they pose further concern because they can navigate in shallow water areas that are less accessible by other craft. However, few scientific studies have investigated, quantified or evaluated the environmental impacts of PWC operation and little is known about the cumulative or relative nature of PWC-related impacts.

In response to this widespread uncertainty, the Massachusetts Office of Coastal Zone Management, in partnership with the National Oceanic and Atmospheric Administration's Coastal Services Center, has collected and evaluated scientifically valid environmental, safety and management data to support the responsible development of public policy regarding the management of PWC. This document presents the findings of that work.

I hope that municipal, state, federal and non-profit coastal managers, as well as others involved in recreational boating issues will find it helpful in addressing the many difficult aspects of personal watercraft management. Thank you for your interest in keeping Massachusetts waters clean, safe and enjoyable for its many diverse user groups.

Very truly yours,

Bob Durand
Secretary of Environmental Affairs
Commonwealth of Massachusetts

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APPENDICES:

EXECUTIVE SUMMARY

Personal watercraft (PWC) are compact, powerful and agile vessels that have revolutionized the world of recreational boating. Although PWC ownership and sales have decreased in recent years, PWC use has remained high and these vessels continue to represent a modest, yet profitable sector of the recreational boating industry. However, as PWC popularity and use has increased, so has public concern regarding their impact on the physical and socio-cultural environment. Few studies specifically examine the consequences of PWC design and use, but these vessels are frequently associated with management issues such as multiple-use conflicts, noise complaints, public safety concerns and natural resource damage. The *PWC Management Guide* attempts to improve community-based management of these issues by providing updated information about PWC characteristics and the ecological and social impacts that these vessels have on coastal and marine resources.

In general, the *PWC Management Guide* serves as a reference handbook for the diverse array of individuals, agencies and communities involved in PWC management. It targets a large audience and provides instruction on assessing and managing PWC-related environmental impacts. Moreover, it offers a framework by which to evaluate individual PWC management efforts and, if used by communities sharing a given body of water, it potentially enhances the consistency and compatibility of concurrent management efforts. Although the *Guide* focuses primarily on marine and estuarine environments, most of the information it presents is also applicable to freshwater systems.

Chapter One provides insight into the history and popularity of these unique vessels and discusses some of the underlying considerations that readers should keep in mind when addressing PWC issues. Chapter Two summarizes the information that currently exists regarding the environmental impacts of recreational boating (i.e. air and water pollution, wildlife disturbance, habitat destruction, noise, aesthetic degradation and public safety threats). In doing so, it compares PWC-related impacts to those of more traditional vessels and highlights some of the scientific uncertainties that complicate PWC management. Chapter Two also delineates the data and information necessary to conduct site-specific PWC assessments. These data and information are important because the factors that determine the nature and extent of PWC impacts vary widely and it is not always possible to transfer scientific results from one site to another.

Chapter Three presents a broad range of management strategies that can be used to mitigate PWC impacts. These strategies range from rather simple, voluntary measures to complex regulatory frameworks. In between are a myriad of more moderate strategies, such as zoning, education, licensing, certification and noise abatement. Where possible, Chapter Three uses illustrative case studies to show how these strategies can be modified to meet the specific needs of different communities. Finally, since effective PWC management begins with effective policy development, Chapter Four examines both the general steps and specific considerations that pertain to PWC policy development. More specifically, it discusses the recognition, definition and refinement of emerging issues; the development and evaluation of policy alternatives; and the initiation, implementation and modification of selected policy solutions.